

WHAT IS CLAIMED IS:

1. An action of a piano capable of being switched between a normal performance mode and a silent performance mode, the action comprising:

a hammer operating portion for swinging a hammer to strike a string upon key depression; and

a transmission switching device for switching hammer operating portion between normal performance mode and silent performance mode, wherein

the hammer operating portion being operated to strike the string in the normal performance mode upon key depression, and

the hammer operating portion not being operated in the silent performance mode upon key depression, and

a load switching device for providing weighted load for keys, comprising

a weight lever comprising a first end and a second end;

wherein one of the first and second ends is pivotably connected above the key,

wherein the other of the first and second ends is arranged and constructed to abut upon a top surface of the key,

said weight lever contacts the top surface of said key upon selection of silent performance mode, wherein

said weight lever is capable of inertial motion independently of the key to duplicate hammer throw,

effect of said weight lever to the key is reduced during normal performance mode.

2. The action according to claim 1, wherein said transmission switching device and load switching device operate together.

3. The action according to claim 1, wherein said transmission switching device comprises,

a rotation body with a cross section comprising a cam lobe,

wherein said cam lobe operating to remove the hammer operating portion away from a physical interface with the key.

4. An action of a piano capable of being switched between a normal performance mode and a silent performance mode, the action comprising:

a hammer operating portion for swinging a hammer to strike a string upon key depression; and

a transmission switching device for switching hammer operating portion between normal performance mode and silent performance mode, wherein

the hammer operating portion being operated to strike the string in the normal performance mode upon key depression, and

the hammer operating portion not being operated in the silent performance mode upon key depression, and

a load switching device for providing weighted load for keys, comprising

a weight lever comprising a first end and a second end;

wherein one of the first and second ends is pivotably connected above the key,

wherein the other of the first and second ends is arranged and constructed to abut upon a top surface of the key,

said weight lever contacts the top surface of said key upon selection of silent performance mode, wherein

said weight lever is capable of inertial motion independently of the key to duplicate hammer throw,

said weight lever is removed from contact with the top surface of the key during normal performance mode.

5. The action according to claim 4, wherein said transmission switching device and load switching device operate together.

6. The action according to claim 5, wherein said weight lever has a rotation roller on the other of the first and second ends, and wherein said weight lever abuts upon the top surface of the key via the rotation roller.
7. The action according to claim 6, wherein said top surface of key further includes,
 - layer of sound deadening material, wherein
 - rotation roller abuts upon the top surface of the key via the sound deadening material.
8. The action according to claim 7, wherein sound deadening material is felt.
9. The action according to claim 4, wherein said transmission switching device comprises,
 - a rotation body with a cross section comprising a cam lobe,
 - wherein said cam lobe operating to remove the hammer operating portion away from a physical interface with the key.
10. The action according to claim 4, wherein said load switching device comprises,
 - a lifting rail arranged and constructed to remove the weight levers away from contacting the top surface of the key during the normal performance mode.
11. An action of a piano capable of being switched between a normal performance mode and a silent performance mode, the action comprising:
 - a hammer operating portion for swinging a hammer to strike a string upon key depression; and
 - a transmission switching device for switching hammer operating portion between normal performance mode and silent performance mode, wherein

the hammer operating portion being operated to strike the string in the normal performance mode upon key depression, and

the hammer operating portion not being operated in the silent performance mode upon key depression, and

a load switching device for providing weighted load for keys, comprising

a weight lever comprising a first end and a second end;

wherein one of the first and second ends is pivotably connected above the key,

wherein the other of the first and second ends is arranged and constructed to abut upon a top surface of the key,

said weight lever contacts the top surface of said key upon selection of silent performance mode, wherein

said weight lever is capable of inertial motion independently of the key to duplicate hammer throw,

said weight lever is moved along the top surface of the key to reduce the effects of the weight lever during normal performance mode.

12. The action according to claim 11, wherein said transmission switching device comprises,

a rotation body with a cross section comprising a cam lobe,

wherein said cam lobe operating to remove the hammer operating portion away from a physical interface with the key.

13. The action according to claim 11, wherein said load switching device comprises,

a slide rail to reposition the other of the first and second ends over the intermediate plate providing the fulcrum of the key during normal performance mode, and

wherein the slide rail incrementally positions the other of the first and second ends away from the intermediate plate for adjusting the touch and feel of the key during silent performance mode.

14. The action according to claim 11 wherein the transmission switching device and the load switching device function together.

15. An action of a piano capable of being switched between a normal performance mode and a silent performance mode, the action comprising:

- a hammer operating portion for swinging a hammer to strike a string upon key depression; and

- a transmission switching device for switching hammer operating portion between normal performance mode and silent performance mode, comprising

- a rotation body with a cross section comprising a cam lobe, wherein said cam lobe operating to remove the hammer operating portion away from a physical interface with the key, and

- the hammer operating portion being operated to strike the string in the normal performance mode upon key depression, and

- the hammer operating portion not being operated in the silent performance mode upon key depression, and

- a load switching device for providing weighted load for keys, comprising

- a weight lever comprising a first end and a second end;

- wherein one of the first and second ends is pivotably connected above the key,

- wherein the other of the first and second ends is arranged and constructed to abut upon a top surface of the key,

- a slide rail to reposition the other of the first and second ends over the intermediate plate providing the fulcrum of the key during normal performance mode, and

- said weight lever contacts the top surface of said key upon selection of silent performance mode, wherein

- said weight lever is capable of inertial motion independently of the key to duplicate hammer throw,

- said weight lever is moved along the top surface of the key to reduce the effects of the weight lever during normal performance mode

wherein the slide rail incrementally positions the other of the first and second ends away from the intermediate plate for adjusting the touch and feel of the key during silent performance mode.